SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences Third Year (Semester -VI)

November 2015 Examination

B.Sc. Medical Laboratory Technology (MLT)

Time : 2.30 Hrs. **[Max. Marks : 80]**

BIOCHEMISTRY

Q.P Code : AHS-105

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Describe thyroid function tests in detail.
2. What is recombinant DNA? Describe recombinant DNA technique.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Define jaundice. Mention the types of jaundice. Explain the various biochemical tests to diagnose hemolytic jaundice.
4. Mention the different blotting techniques. Explain in detail about western blotting.
5. Role of lungs in regulation of acid base balance.
6. Explain the principle and applications of gel filtration chromatography.
7. Oral glucose tolerance test.
8. Explain the pituitary function tests.
9. Metabolic acidosis and compensatory mechanism.
10. Flame photometry.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Enzymes used in pancreatic diseases.
12. Mention any three protein purification techniques.
13. Beer – Lambert's Law.
14. What is Mean, Mode & Median.
15. Types of RNA.
16. Name the renal tubular function assessment tests.
17. What is normal a) Blood pH b) Blood Bicarbonate c) pCO_2
18. Mention any three cardiac enzymes used in the diagnosis of myocardial infarction.
19. Reducing sugars in urine.
20. Write the principle of colorimeter.
21. What is glycated hemoglobin (HbA_{ic})? Mention its normal levels.
22. Mention the reference ranges for
    a) Serum Urea
    b) Serum Creatinine
    c) Serum uric Acid

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MICROBIOLOGY

Q.P Code : AHS-109

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Classify Picorna viruses. Describe pathogenesis and laboratory diagnosis of Polio. Add a note on its prophylaxis.
2. Enumerate dermatophytes. Describe in detail about infections and laboratory diagnosis of dermatophytosis.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Candida albicans.
4. Rhinosporidiosis.
5. Histoplasmosis.
6. Mycetoma.
7. Methods of viral cultivation.
8. Draw a neat labeled diagram of influenza virus. Describe the laboratory diagnosis of viral influenza.
9. Laboratory diagnosis of HIV infection.
10. Classify herpesviridae. Describe the pathogenesis and laboratory diagnosis of varicella zoster infection.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Classification of fungi.
12. Fungi causing mycetoma.
13. Mycotoxins.
14. Germ tube test.
15. List three opportunistic fungi.
16. Name the dimorphic fungi.
17. Name three arboviral infections.
18. Draw a neat labeled diagram of bacteriophage.
19. Prophylaxis of hepatitis B infection.
20. Name three oncogenic viruses.
21. Steps in viral replication.
22. Negri bodies.

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PATHOLOGY

Q.P Code : AHS-107

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Describe the various transfusion reactions in detail and write about the precautions to be taken to avoid these reactions.
2. What is immunohistochemistry? Write in detail the steps involved in doing IHC staining procedure.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Write about the procedure involved in characterization of human chromosomes by various banding techniques.
4. What is the basic principle of flow cytometry and write about the disadvantages of the procedure.
5. What are the different types of blood bags used in a blood bank, write about the anticoagulants used for storage of blood.
6. Mention the procedure involved in preservation of immortalized cell lines.
7. List the cytologic features of malignant smear are fine needle aspiration cytology.
8. What is antigen retrieval and describe the procedure involved.
9. Describe cytological features of benign and malignant conditions of breast.
10. Autologous transfusion.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. In the given example "Xq22.9" which does each alphabet and member represent?
12. Define primary antibody and secondary antibody in IHC.
13. Mention the parts of an incubator.
14. What is subculturing. Mention two methods to do subculture.
15. Disadvantages of fine needle aspiration cytology.
16. Name three transfusion transmitted diseases.
17. If the patients' blood group is 'A' positive, list the Antigen and Antibody in his blood.
18. What are oncogenes? Give two examples.
19. Name three uses of image analysis.
20. Mention the parts of a flow cytometer.
21. List the different chromosomal banding techniques.
22. Causes of positive indirect coomb's test.

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